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Constrained Perturbative Expansion of the DGP Model CHAD MIDDLETON, GEORGE SIOPSIS, University of Tennessee, Knoxville — We address the vDVZ discontinuity of the 5D DGP model which consists of a 3-brane residing in a flat, infinite-volume bulk. It was argued by Gabadadze [hep-th/0403161] that the breakdown of the 5D perturbative expansion is due to the weak-field expansion itself and is avoided when a different expansion - the constrained perturbation theory - is adopted. Expanding on this work, we subject the DGP model to more general regulating conditions and solve the field equations. The solution reduces to the standard DGP and Gabadadze solutions for special choices of the brane "gauge" parameter.

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